

APPLICANT(S): Adrian PAZ

SERIAL NO.: n/a (Nat. Phase of PCT/IL2004/000593)

I.A. FILED: July 2, 2004

AMENDMENTS TO THE CLAIMS

Kindly amend the claims as follows:

Claims 1-28 (cancelled)

29. (New) An anchoring device for use in surgery within a cavity of the human body, comprising connected first and second attaching means, said first attaching means for attaching the device to an internal surface within a cavity of the human body and said second attaching means for attaching to surgical instruments or devices within said cavity.

30. (New) The anchoring device according to claim 29, wherein the first attaching means comprise minimally invasive means for attaching to the internal surface of a cavity or to various organs within a cavity, said means are selected from vacuum means, such as vacuum cups; magnetic means, such as magnets or electromagnets situated on either interior, exterior or both surfaces of the cavity; mechanical means, such as barbs, fixation wires or self retaining clamps; adhesive means, such as pressure adhesive gel or any combination thereof.

31. (New) The anchoring device according to claim 29, further including means allowing it to be moved from one position to another and to be reattached to the undersurface of the cavity, or to various tissues within a cavity, without creating any additional significant openings in the cavity wall.

32. (New) The anchoring device according to claim 29, further including means for attaching a plurality of anchoring devices, selected from vacuum cups, magnetic means, mechanical means, adhesive means or any combination thereof, together for holding a larger weight or for distributing the load therebetween.

33. (New) The anchoring device according to claim 29, wherein; the second attaching means comprises mechanical means, such as a vacuum cup, a hook and loop attachment, a connecting string or a rod; adhesive means, magnetic means or any combination thereof; and

the surgical devices attached to the second attaching means is selected from grasping means; cutting means; blood sealing units; illumination means; imaging means, such as a camera and camera cleaning means; or a minimally invasive forcing means by which force is exerted upon

APPLICANT(S): Adrian PAZ
SERIAL NO.: n/a (Nat. Phase of PCT/IL2004/000593)
I.A. FILED: July 2, 2004

the cavity walls or upon various organs within the cavity, for example a pulling means, such as wires for attaching to another internal surface of the cavity or to various organs within the cavity; a pushing means, such as rods for attaching to another internal surface of the cavity or to various organs within the cavity; or any combination thereof.

34. (New) The anchoring device according to claim 29, additionally comprising a vacuum cup for anchoring surgery devices during surgery, comprising means for creating a vacuum inside the cup, and attaching means for attaching to surgical instruments or devices.

35. (New) The anchoring device according to claim 34, additionally comprising; optional vacuum application means, such as a valve connected to vacuum generating means, said valve optionally including a means for holding itself in an open configuration with a free passage for fluids whilst there is vacuum in the cup, and for automatically closing itself by shutting off the fluids passage when there is no longer vacuum in the cup; and optional vacuum release means for allowing ambient fluid into the cup, such as a flexible means which, when pressed or deformed, allows ambient fluid into the cup to cancel the vacuum there, said means is activated for example using laparoscopic means.

36. (New) The anchoring device according to claim 34, additionally comprising an electronically-controlled vacuum pump comprising;
at least one vacuum generating means;
optionally a vacuum controller for controlling the level of vacuum required;
at least one timer means for activating the vacuum pump for a predefined time interval when receiving a trigger input; and
at least one indicator means, such as a light and/or buzzer, for indicating that the vacuum is about to end.

37. (New) An anchoring system for surgery within a cavity of the human body, comprising;
at least one anchoring device according to claim 1;
at least one surgical instrument or device releasably attached to the second attaching means of said anchoring device;
a controlling means releasably attached to said anchoring device or surgical instrument such that said controlling means is used to install said anchoring means or surgical instrument into a cavity of the human body, to remove them therefrom and optionally to relocate the anchoring means

APPLICANT(S): Adrian PAZ
SERIAL NO.: n/a (Nat. Phase of PCT/IL2004/000593)
I.A. FILED: July 2, 2004

within the cavity, at least one portion of said controlling means is operated by the operator from outside the body.

38. (New) A method of performing surgery within a cavity of the human body by; introducing, into said cavity, at least one anchoring means, comprising connected first and second attaching means;

attaching said first attaching means to an internal surface within said cavity; and attaching surgical instruments to said second attaching means; such that the surgical apparatus is contained within the cavity of the human body.

39. (New) The method of performing surgery within a cavity of the human body, according to claim 38, comprising;

providing at least one anchoring device comprising connected first and second attaching means;

providing at least one controlling means;

creating an access incision from the outside of the human body to provide access to an inaccessible cavity or using a natural opening to provide access to an accessible cavity;

using the controlling means to introduce at least one said anchoring device through the access opening into the cavity;

attaching said anchoring device to an internal wall of said cavity or to some other internal organ using its first attaching means;

using the controlling means to introduce at least one surgical instrument, for example a grasping instrument to be attached to an internal organ, through the access opening into the cavity;

attaching said surgical instrument to said anchoring device using its second attaching means; and removing the controlling means from the cavity and leaving the access opening free for other use during the surgery;

controlling the surgical equipment installed within the cavity to perform the surgery; and

using a controlling means to remove said surgical instruments from the cavity;

thereby installing surgical apparatus into and removing it from the cavity whilst leaving the access incision unimpeded during surgery.

40. (New) The method of performing surgery within a cavity of the human body, according to claim 38, additionally comprising;

APPLICANT(S): Adrian PAZ
SERIAL NO.: n/a (Nat. Phase of PCT/IL2004/000593)
I.A. FILED: July 2, 2004

attaching at least one forcing means to the abdominal wall by some attachment means such as vacuum cups, magnetic means, mechanical means, adhesive means, fixation wires or any combination thereof; and

forcing the abdominal wall upwards,

thus constructing a contained frame within the cavity used for lifting the abdominal wall during surgery.

APPLICANT(S): Adrian PAZ
SERIAL NO.: n/a (Nat. Phase of PCT/IL2004/000593)
I.A. FILED: July 2, 2004

AMENDMENTS TO THE SPECIFICATION

The attached 28 sheets of drawings replace all drawing figures to conform with line thickness and uniformity requirements. No drawing elements have been added, deleted, or changed other than to conform with formal requirements.